Amendments to the Specification:

Please replace the paragraph starting at page 2, line 30 and ending at page 3, line 3 with the following amended paragraph:

We have identified a protein with the following amino acid sequence:

~~MSHYIELTEE NFESTIKKGV ALVDFWAPWC GPCKMLSPVI DELASEYEGK AKICKVNTDE QEELSAKFGI RSIPTLLFTK DGEVVHQLVG VQTKVALKEQ LNKLLG~~ Met Ser His Tyr Ile Glu Leu Thr Glu Glu Asn Phe Glu Ser Thr Ile Lys Lys Gly Val Ala Leu Val Asp Phe Trp Ala Pro Trp Cys Gly Pro Cys Lys Met Leu Ser Pro Val Ile Asp Glu Leu Ala Ser Glu Tyr Glu Gly Lys Ala Lys Ile Cys Lys Val Asn Thr Asp Glu Gln Glu Glu Leu Ser Ala Lys Phe Gly Ile Arg Ser Ile Pro Thr Leu Leu Phe Thr Lys Asp Gly Glu Val Val His Gln Leu Val Gly Val Gln Thr Lys Val Ala Leu Lys Glu Gln Leu Asn Lys Leu Leu Gly (SEQ ID NO:1)

Please replace the paragraph starting at page 3, line 12 and ending at page 3, line 13 with the following amended paragraph:

The invention also provides polypeptides containing the redox active peptide sequence ~~CGPC~~ Cys Gly Pro Cys (SEQ ID NO:2), capable of inhibiting the activation of NF-κB.

Please replace the paragraph starting at page 3, line 15 and ending at page 3, line 20 with the following amended paragraph:

The invention also provides a *H. pylori* protein having the following amino acid sequence:

~~MSHYIELTEE NFESTIKKGV ALVDFWAPWC GPCKMLSPVI DELASEYEGK AKICKVNTDE QEELSAKFGI RSIPTLLFTK DGEVVHQLVG VQTKVALKEQ LNKLLG~~ Met Ser His Tyr Ile Glu Leu Thr Glu Glu Asn Phe Glu Ser Thr Ile Lys Lys Gly Val Ala Leu Val Asp Phe Trp Ala Pro Trp Cys Gly Pro Cys Lys Met Leu Ser Pro Val Ile Asp Glu Leu Ala Ser Glu Tyr Glu Gly Lys Ala Lys Ile Cys Lys Val Asn Thr Asp Glu Gln Glu Glu Leu Ser Ala Lys Phe Gly Ile Arg Ser Ile Pro Thr Leu Leu Phe Thr Lys Asp Gly Glu Val Val His Gln Leu Val Gly Val Gln Thr Lys Val Ala Leu Lys Glu Gln Leu Asn Lys Leu Leu Gly (SEQ ID NO:1)

Please replace the paragraph starting at page 6, line 19 and ending at page 6, line 21 with the following amended paragraph:

The present invention provides a protein, H. pylori thioredoxin, comprising a redox-active motif ~~(CGPC), (cysteine-glycine-proline-cyseine)~~ Cys Gly Pro Cys (SEQ ID NO: 2), capable of inhibiting activation of the transcription factor NF-κB.

Please replace the paragraph starting at page 6, line 23 and ending at page 6, line 30 with the following amended paragraph:

The protein has the amino acid sequence:

~~MSHYIELTEE NFESTIKKGV ALVDFWAPWC GPCKMLSPVI DELASEYEGK AKICKVNTDE QEELSAKFGI RSIPTLLFTK DGEVVHQLVG VQTKVALKEQ LNKLLG~~ Met Ser His Tyr Ile Glu Leu Thr Glu Glu Asn Phe Glu Ser Thr Ile Lys Lys Gly Val Ala Leu Val Asp Phe Trp Ala Pro Trp Cys Gly Pro Cys Lys Met Leu Ser Pro Val Ile Asp Glu Leu Ala Ser Glu Tyr Glu Gly Lys Ala Lys Ile Cys Lys Val Asn Thr Asp Glu Gln Glu Glu Leu Ser Ala Lys Phe Gly Ile Arg Ser Ile

Pro Thr Leu Leu Phe Thr Lys Asp Gly Glu Val Val His Gln Leu Val Gly Val Gln Thr Lys Val Ala Leu Lys Glu Gln Leu Asn Lys Leu Leu Gly

(SEQ ID NO: 1)

Please replace the paragraph starting at page 7, line 4 and ending at page 6, line 18 with the following amended paragraph:

The present invention also includes within its scope peptides derived from *H. pylori* thioredoxin identified above where such derivatives have redox-activity or where such derivatives inhibit NF-κB activation. These derivatives will normally be peptide fragments of the native protein which include the redox-active motif, but can also be functionally equivalent variants of the recombinant thioredoxin modified by well known techniques such as site-directed mutagenesis. For example, it is possible by such techniques to substitute amino acids in a sequence with equivalent amino acids. Groups of amino acids known to be normally equivalent are:

(a) ~~A S T P G~~ Ala Ser Thr Pro Gly (SEQ ID NO: 3);
(b) ~~N D E Q~~ Asn Asp Glu Gln (SEQ ID NO: 4);
(c) ~~H R K~~ His Arg Lys;
(d) ~~M L I V~~ Met Leu Ile Val (SEQ ID NO: 5); and
(e) ~~F Y W~~ Phe Tyr Trp.

Please replace the paragraph starting at page 12, line 13 and ending at page 13, line 2 with the following amended paragraph:

Expression and purification of recombinant H. pylori Trx. Transformants of *E. coli* BL21(DE3)pLysS with plasmid pET-16b (Novagen) containing the Trx gene (HP 824) were grown at 37°C in LB broth supplemented with ampicillin (100

μg/ml) and chloramphenicol (30 μg/ml). *H. pylori* Trx was expressed as an N-terminal decahistidine fusion protein in *E. coli*. The gene coding for Trx was amplified by PCR using Expand™ (Boehringer Mannheim), using the amplification conditions recommended by the manufacturer. Under these conditions a single product was obtained and this was cloned into the expression plasmid via the *Bam*HI and *Nde*I restriction sites. The following primers were used: forward primer, 5'-CGCCATATGAGTCACTATATTGAATTAAC-3' (SEQ ID NO: 6); reverse primer 5'-CGCGGATCCGCCTAAGAGTTTGTTCAATTG-3' (SEQ ID NO: 7). Overexpression of the fusion protein was induced by adding 1 mM isopropyl-β-D-thiogalactoside at exponential phase and the incubation continued for 3 h at 37°C. The induced cells were harvested by centrifugation (10,000 x g, 15 min, 4°C), washed once with 50 mM Tris·HCl (pH 7.5) and subjected to sonication (3 x 1 min). The soluble fusion protein was purified to homogeneity by metal chelate chromatography on a Ni^{2+} column (3 ml) according to the manufacturer's instructions. The protein was eluted with 0.4 M imidazole in 20 mM Tris·HCl (pH 7.5) containing 0.5 M NaCl. Typically, 2-3 mg of homogenous Trx/100 ml culture was obtained by this procedure. Both the histidine tagged fusion protein and the recombinant Trx obtained after cleavage of the histidine tail by Factor Xa were indistinguishable in their spectroscopic properties and redox behaviour.

Please replace the paragraph starting at page 14, line 6 and ending at page 14, line 19 with the following amended paragraph:

Electrophoretic mobility-shift assays (EMSA) For binding assays, nuclear extracts (4 μg of protein) were incubated with 10000 cpm of the ^{32}P-labelled oligonucleotide (22 bp) comprising the consensus sequence of the NF-κB (5`-AGT TGA GGG GAC TTT CCC AGG C-3`) (SEQ ID NO: 8) (3`-TCA ACT CCC CTG AAA GGG TCC G-5`) (SEQ ID NO: 9) that had been previously labelled with (γ-^{32}P)ATP at the 5'-ends with T4 polynucleotide kinase in 20 μl binding reaction in binding buffer (10 mM Tris, pH 7.5, 40% glycerol, 5 mM

DTT, 1 mM EDTA, 100 mM NaCl and 0.1 mg/ml nuclease free bovine serum albumin) in the presence of 2 μg of poly(dI-dC) as non specific competitor. The reaction mixture was then incubated for 30 min at room temperature after the addition of the probe DNA. The binding reaction was terminated using a loading dye prior to adding the samples to the gels. The DNA-protein complexes were separated on 5% polyacrylamide gels (pre run at 80 V for 30 min) at 150 V for 1-2 h at room temperature. After electrophoresis was performed, the gels were dried and autoradiographed at -70°C for 24-36 h with intensifying screens.